

Office of the City Manager
Post Office Box 15225
Chesapeake, Virginia 23328-5225
Office: (757) 382-6166
Fax: (757) 382-6507

October 10, 2005

Mr. J. Douglas Fritz
MS4 Program Manager
Commonwealth of Virginia
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, Virginia 23219

RE: MS4 Permit Reapplication

Dear Mr. Fritz:

Attached are one original and four copies of the Municipal Separate Storm Sewer System (MS4) Permit reapplication for the City of Chesapeake. The reapplication package includes:

- EPA Form 1;
- Fourth Year Annual Report;
- Description of existing and proposed elements of the stormwater management program for the upcoming permit period;
- Identification of any previously unidentified water bodies that receive discharges from the MS4; and
- A summary of any known water quality impacts on the newly identified receiving waters based on the best available data.

In addition, the City of Chesapeake, in conjunction with the other five Hampton Roads Phase I communities and the Hampton Roads Planning District Commission, will submit a description of regional efforts, including the proposed effectiveness indicators for the upcoming five-year term, under separate cover by October 12, 2005.

Please feel free to contact Richard Broad III, Stormwater Administrator, at (757) 382-3321 if you have any questions.

Sincerely,



Dr. Clarence V. Cuffee
City Manager

cc: Amar Dwarkanath, Deputy City Manager, Operations/Water Resources
Patricia C. Biegler, P.E., Director of Public Works
Richard Broad III, P.E., Stormwater Administrator

*"The City of Chesapeake adheres to the principles of equal employment opportunity.
This policy extends to all programs and services supported by the City."*

Signature and Certification

City of Chesapeake MS4 Permit Reapplication

40 CFR 122.22 requires that all permit applications for a municipality, State, Federal, or other public agency be signed as follows:

“By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).”

The person who signs must make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”


Dr. Clarence V. Cuffee

Name

City Manager

Official Title

Signature



Date Signed

9-28-05

EPA FORM 1 ATTACHMENT

X. Existing Environmental Permits:

Permit #	Facility Name	Responsible Dept
WATER PERMITS		
VA0088625	City of Chesapeake MS4	Public Works
VAR104255	Chesapeake Expressway Toll Plaza Expansion	Public Works
VA0088404	Northwest River WTP	Public Utilities
VPA01073	Northwest River WTP Sludge Lagoons	Public Utilities
VAR103641	Northwest River WTP Residuals Disposal Site	Public Utilities
VA0073598	Mains Creek Well Pump Station	Public Utilities
VA0091405	Lake Gaston WTP	Public Utilities
VAR102930	Lake Gaston WTP	Public Utilities
VAG403052	Chesapeake Mosquito Control Commission	Chesapeake Mosquito Control Commission
VAR10473	Campostella Square	Chesapeake Redevelopment and Housing Authority
VA0024562	Hickory Schools WWTP*	Chesapeake School Board
GROUNDWATER WITHDRAWAL		
GW0043900	Western Branch/Northwest River	Public Utilities
404 SURFACE WATER WITHDRAWAL		
87-2007-06/404	Deep Creek Canal Intake	Public Utilities
UNDERGROUND INJECTION (UIC)		
VAS5R211MCHE	Western Branch Well Field	Public Utilities
AIR PERMITS		
61264	Stationary Source Permit to Operate Generator for City Jail	General Services
61265	Northwest River WTP	Public Utilities

*Facility is no longer in use.

EPA WASTE GENERATOR ID NUMBERS		
VAD988172193	(SQG)	Chesapeake Civic Center
VA0000605493	(CESQG)	Chesapeake Fire Station Number 2
VAD988223491	(CESQG)	Chesapeake Traffic Operations
VAR000002808	(CESQG)	Chesapeake Public Works-S. Military Hwy
VAD981740558	(SQG)	Chesapeake City Garage
VAR000005058	(LDF)	Hollowell Ln

DEPARTMENT OF CONSERVATION AND RECREATION PERMIT APPLICATION FEE
FORM
EFFECTIVE SEPTEMBER 2004

INSTRUCTIONS

Applicants for an individual Virginia Stormwater Management Program (VSMP) Permit is required to pay permit application fees. Fees are also required for registration for coverage under General Permits. Fees must be paid when applications for permit issuance, reissuance* or modification are submitted. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received. (* - the reissuance fee does not apply to VSMP - see the fee schedule included with this form for details.)

The permit fee schedule is included with this form. Fees for permit issuance or reissuance and for permit modification are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Conservation and Recreation
Division of Finance, Accounts Payable
203 Governor Street
Richmond, Virginia 23219

A copy of the form and a copy of your check or money order should accompany the permit application. You should retain a copy for your records. Please direct any questions regarding this form or fee payment to the Urban Programs Section of the Department of Conservation and Recreation at (804) 786-3998.

APPLICANT NAME: Dr. Clarence V. Cuffee SSN/FIN: 54072 1442

ADDRESS: City of Chesapeake, P.O. Box 15225
Chesapeake, VA 23328

DAYTIME PHONE: (757) 382 - 6166

FACILITY/ACTIVITY NAME: Chesapeake Municipal Separate Storm Sewer System

LOCATION: Chesapeake, VA

TYPE OF PERMIT APPLIED FOR:

(from Fee Schedule): VSMP Municipal Stormwater/MS4 (Large and Medium)

TYPE OF ACTION: New Issuance- X Reissuance Modification

AMOUNT OF FEE SUBMITTED

(from Fee Schedule): \$3,800

EXISTING PERMIT NUMBER (if applicable): VA0088625

FOR DCR USE ONLY

Date: DC #:

FEE SCHEDULES

A. VSMP Permits. Applications for issuance of new individual VSMP permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. [NOTE: VSMP permittees pay an Annual Permit Maintenance Fee instead of a reapplication fee. The permittee is billed separately by DCR for the Annual Permit Maintenance Fee.]

TYPE OF PERMIT	ISSUANCE	MODIFICATION
VSMP Municipal Stormwater / MS4 Individual (Large and Medium)	\$21,300	\$10,650
VSMP Municipal Stormwater / MS4 Individual (Small)	\$2,000	\$1,000

B. Registration Statements for VSMP General Permit Coverage. The fee for filing a permit application (registration statement) for coverage under a VSMP stormwater general permit issued by the permit issuing authority.

TYPE OF PERMIT	ISSUANCE
VSMP Municipal Stormwater / MS4 General Permit (Small)	\$600
VSMP General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres)	\$500
VSMP General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development equal to or greater than 1 acre and less than 5 Acres)	\$300

C. Permit Maintenance Fees. The annual permit maintenance fees apply to each VSMP permit identified below, including expired permits that have been administratively continued.

TYPE OF PERMIT	MAINTENANCE
VSMP Municipal Stormwater / MS4 (Large and Medium)	\$3,800
VSMP Municipal Stormwater / MS4 Individual (Small)	\$400
VSMP General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres)	\$0
VSMP General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development equal to or greater than 1 acre and less than 5 Acres)	\$0

COMMONWEALTH OF VIRGINIA

Department of Conservation and Recreation
203 Governor Street, Suite 414
Richmond, Virginia 23219

Make Check Payable to the
TREASURER OF VIRGINIA
And mail to the address shown

Fed. I.D. #54-6004497
DUNS # 00-313-3790

Payment is due 30 days
after receipt of invoice.

INVOICE

Attn: Mariellen J. Calabro
City of Chesapeake
Department of Public Works
Stormwater Division
P O Box 15225 Civic Center
Chesapeake, VA 23328

Invoice 11448
Date: September 8, 2005

Taxpayer I.D. # _____

Please detach and return remittance copy
with payment to ensure proper credit
to your account.

Contact: Michael Faszewski
(804) 786-5099

DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT
Annual MS4 maintenance fee Permit Number VA0088625	1		3800.00	3800.00

Credit Information

AMOUNT DUE \$ 3,800.00

The Department of Conservation and Recreation may charge interest on all past due accounts receivable in accordance with guidelines promulgated by the Department of Accounts and at the underpayment rate prescribed in Section 58.1-15 of the Code of Virginia. Each past due accounts receivable may also be charged an additional amount which shall approximate the administrative cost incurred in collecting the past due amount. The Department may also assess late payment penalty fees as appropriate.

1 - Recipient Copy

2 - Remittance Copy

3 - Accounting Copy

Municipal Separate Storm Sewer (MS4) VPDES Permit Reapplication

City of Chesapeake, Virginia

October 2005

Prepared for:

Commonwealth of Virginia
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, Virginia 23219

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1.0 GENERAL INFORMATION

Name of Applicant: City of Chesapeake, Virginia

EPA I.D. Number: N/A

Location of Facility: Chesapeake, Virginia

Mailing Address: City Hall Building, Third Floor
306 Cedar Road
Post Office Box 15225
Chesapeake, Virginia 23328-5225

Contact Person: Richard Broad III, P.E.

Title: Stormwater Administrator

Telephone Number: (757) 382-3321

SIC Code(s): 9199, General Government

Operator: City of Chesapeake

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VAR000002808	(CESQG)	Chesapeake Public Works-S. Military Hwy
VAD981740558	(SQG)	Chesapeake City Garage
VAR000005058	(LDF)	Hollowell Ln

1.1 Summary

The City of Chesapeake is located in the Tidewater Region of Virginia. It is bound on the north by the Cities of Norfolk and Portsmouth, on the east by the City of Virginia Beach, on the west by the City of Suffolk, and on the south by the State of North Carolina. Chesapeake was formed in 1963 by the merger of the City of South Norfolk with Norfolk County. Chesapeake has an area of 353 square miles.

Chesapeake is characterized by moderate to heavy residential and commercial development in the north portion of the City with heavy industrial development generally limited to areas along the Elizabeth River or in planned industrial parks. With the exception of moderate development in the Great Bridge area and along the Cedar Road corridor, the majority of the southern portion of the City is made up of agricultural or undeveloped lands. Nearly one quarter of the City is located in the Great Dismal Swamp Wildlife Refuge.

The northern and western sections of the City drain to the Elizabeth River and its tributaries, while the southern and eastern areas drain to the Chowan/Dismal Swamp Basin via the Northwest River, the North Landing River, and their tributaries. The City of Chesapeake owns or maintains all stormwater systems that convey runoff from City facilities. The City does not maintain interstate or private drainage ditches or structures.

The City of Chesapeake's Stormwater Management Plan is a comprehensive program that identifies structural and nonstructural control measures to reduce the discharge of pollutants to the maximum extent practicable (MEP). The most cost-effective approach to achieving the MEP level of control for the City of Chesapeake is to build upon existing City programs, including comprehensive plans, ordinances, maintenance programs, and public education programs, and enhance and supplement these programs, where necessary, over the course of the 5-year VPDES Permit term.

The Stormwater Management Program is funded by a Stormwater Utility Fee paid by all developed properties in the City. Commercial and industrial facilities are charged based on their site's impervious area. These properties can receive some amount of credit if they meet certain water quality and quantity criteria through the use of Best Management Practices (BMP's). Residential properties are billed a flat rate based on an average equivalent residential unit (ERU).

The discharge of stormwater through Chesapeake's MS4 system is currently regulated by VPDES permit VA0088625, effective April 10, 2001 through April 10, 2006.

1.2 Organization of Application

Section 2 of this application includes existing and proposed elements of Chesapeake's stormwater program to address requirements in CFR Title 40 Part 122.26 Section (d)(2)(iv). Section 2 also establishes measurable goals and a schedule for implementing the program elements. Section 3 discusses TMDLs within Chesapeake. Section 4 includes a discussion of the effectiveness indicators used to monitor stormwater program success. Section 5 lists previously unidentified water bodies that receive MS4 discharges, and Section 6 identifies any known water quality impacts of the City's MS4 system.

2.0 PROPOSED STORMWATER MANAGEMENT PROGRAM ELEMENTS FOR APRIL 2006 – APRIL 2011

This section discusses the numerous activities currently performed and proposed by the City of Chesapeake as part of the City's stormwater management program. For uniformity and consistency of program evaluation and reporting, activities are organized based on the six minimum control measures specified in the Phase II MS4 permit applications. Table 1 indicates the specific sections of CFR Title 40 Part 122.26 Section (d)(2)(iv) addressed by the current and proposed elements of the stormwater management program. Tables 2 through 8 identify measurable goals and an implementation schedule for each program element.

2.1 Relationship of Program Elements to CFR Title 40 Part 122.26 Section (d)(2)(iv)

Table 1 lists the sections of CFR Title 40 Part 122.26 Section (d)(2)(iv) and provides corresponding existing and proposed stormwater management program elements to address each requirement.

Table 1. Program Elements to Address CFR Title 40 Part 122.26 Section (d)(2)(iv)

CFR Title 40 Part 122.26 Section	Applicable Program Element(s)
(d)(2)(iv)(A)(1)	Regular inspections of public structural BMPs Maintenance agreements for private structural BMPs Random inspections of private structural BMPs System maintenance as necessary BMP database
(d)(2)(iv)(A)(2)	Compliance with CBPA Require water-quality BMPs City-wide Regular inspections for public structural BMPs Written SOPs for BMP inspections Landscaping requirements for new development BMP design guidance in Public Facilities Manual
(d)(2)(iv)(A)(3)	Regular street sweeping Store deicing materials under cover
(d)(2)(iv)(A)(4)	Assess impacts of flood management projects on water quality
(d)(2)(iv)(A)(5)	Comply with VPDES permit requirements for closed landfill
(d)(2)(iv)(A)(6)	Educational information on City website Educational information through HR Storm Distribution of brochures Certified City pesticide, herbicide, fertilizer applicators
(d)(2)(iv)(B)(1)	Continue to enforce existing ordinance regarding illicit discharges
(d)(2)(iv)(B)(2)	20 dry weather inspections annually, with 4 of the 20 targeted to industrial areas
(d)(2)(iv)(B)(3)	Written SOPs to determine composition of illicit discharges
(d)(2)(iv)(B)(4)	Spill response by Fire Department and Department of Public Works Response to sanitary sewer spills or overflows by Public Utilities Written SOPs for spill response
(d)(2)(iv)(B)(5)	Educational information on City website Educational information through HR Storm Educational information in Public Works newsletter Telephone number provided Civic league presentations
(d)(2)(iv)(B)(6)	Educational information on City website Educational information through HR Storm Distribution of brochures
(d)(2)(iv)(B)(7)	Infiltration and inflow reduction program Sanitary sewer upgrade program
(d)(2)(iv)(C)(1)	List of VPDES-permitted industrial dischargers from DEQ Fire Department conducts industrial inspections on as-needed basis Educational information to industries through HR Storm
(d)(2)(iv)(C)(2)	Water quality testing of identified potential illicit discharges

CFR Title 40 Part 122.26 Section	Applicable Program Element(s)
(d)(2)(iv)(D)(1)	Work to achieve and maintain a fully consistent E&S program Require compliance with Erosion and Sediment Control Ordinance Comply with CBPA Site plans are reviewed by City staff
(d)(2)(iv)(D)(2)	Work to achieve and maintain a fully consistent E&S program Require compliance with Erosion and Sediment Control Ordinance Design guidance in Public Facilities Manual
(d)(2)(iv)(D)(3)	Work to achieve and maintain a fully consistent E&S program Inspectors are certified or working towards certification
(d)(2)(iv)(D)(4)	Require designation of a certified responsible land disturber at each construction site E&S control information in Public Facilities Manual Educational information through HR Storm

2.2 Current Program

Chesapeake has an active stormwater management program in place. The City will continue the current programs described in the following subsections to address the requirements of CFR Title 40 Part 122.26 Section (d)(2)(iv).

2.2.1 Public Education

Public education is an important component of a successful MS4 stormwater management program. The City of Chesapeake will continue to educate the public both through City departments and through participation in HR Storm, a regional stormwater education initiative. Educational programs will address proper disposal of used oil and toxic materials; proper use of pesticides, herbicides, and fertilizers; illicit discharges; and erosion and sediment control at construction sites; as well as other pertinent stormwater-related issues. The following existing stormwater program elements will continue through the upcoming permit period to address public education:

- Participate in HR Storm.
- Include information on proper disposal of used oil and toxic materials; proper use of pesticides, herbicides, and fertilizers; and information regarding illicit discharges on City website.
- Make presentations and provide educational information to civic groups.
- Require that each construction site designate a state-certified responsible land disturber (RLD).
- Distribute educational information regarding disposal of used oil and toxic materials; proper use of pesticides, herbicides, and fertilizers; and information regarding illicit discharges to residents.
- Distribute newsletter including stormwater news and information, pollution prevention tips, and the stormwater website address to residents.
- Provide erosion and sediment control educational information in the Public Facilities Manual, available in print or on-line.
- Continue to provide stormwater education programs in City schools.

2.2.2 Public Involvement

Involving the public in the stormwater management program allows for public input and promotes environmental stewardship. The City will continue to perform the following stormwater program components to promote public involvement:

- Hold public meetings for ordinance changes.
- Meet with civic leagues and allow them opportunities to provide input on City stormwater programs.
- Include public involvement in updates to the City Comprehensive Plan.
- Provide and publicize a telephone number for reporting stormwater complaints and violations, including illicit discharges.
- Organize volunteer litter removal programs.

2.2.3 Illicit Discharge Detection and Elimination

The City of Chesapeake recognizes that illicit discharges can contribute pollutants to the stormwater system. Section 26-346, Illicit Discharges, of Chapter 26, Environment, of the City Code defines and prohibits illicit discharges to the City's stormwater management facilities.

The following efforts will continue to be made to detect and eliminate illicit discharges to the MS4:

- Continue to enforce Section 26-346, Illicit Discharges, of the City Code that addresses illicit discharges and specifically prohibits the discharge of sewage and industrial wastes into the MS4.
- Provide response to petroleum and hazardous material spills through the Fire Department and the Department of Public Works.
- Provide response to sanitary sewer spills through the Department of Public Utilities.
- Continue participation in regional web-based sewer spill reporting system.
- Continue the Department of Public Utilities' inflow and infiltration reduction program to reduce the potential for sanitary sewer overflows.
- Continue the Department of Public Utilities' sanitary sewer upgrade program.
- Require certification of City employees to apply pesticides, herbicides, and fertilizers.
- Follow written standard operating procedures for identifying the composition of illicit discharges.
- Document illicit discharges identified and eliminated.
- Fire Department inspections of hazardous waste TSD facilities and industrial facilities subject to Section 313 of EPCRA that discharge to the MS4 on an as-needed basis.
- Update map of stormwater system and outfalls as necessary.

2.2.4 Construction Site Stormwater Runoff Control

If not properly managed, construction sites can contribute a significant amount of pollutants, particularly sediment, to the stormwater system. The City of Chesapeake administers a local erosion and sediment control program that, at the time of this application submittal has been classified by DCR as a "provisionally consistent" program. To address runoff from construction sites, Chesapeake will continue to:

- Work to achieve and maintain a fully consistent erosion and sediment control program.
- See that plan reviewers and inspectors are state-certified or working towards certification.
- Provide erosion and sediment control guidance in the City Public Facilities Manual.

2.2.5 Post-Construction Stormwater Management in New Development and Redevelopment

New development, and some redevelopment, can result in increases in pollutant loads. Therefore, Chesapeake will continue the following programs to reduce the discharge of pollutants from areas of new development and significant redevelopment:

- Comply with the Chesapeake Bay Preservation Act.
- Require BMPs City-wide to address the quantity and quality of stormwater runoff from new development and redevelopment.
- Regularly inspect municipally-owned BMPs.
- Require maintenance agreements for privately-owned structural BMPs.
- Assess the impacts of flood management projects on water quality.
- Enforce landscaping requirements in new development.
- Maintain BMP database.
- Provide BMP design guidance through the City Public Facilities Manual.

2.2.6 Pollution Prevention and Good Housekeeping for Municipal Operations

Municipal operations have the potential to impact stormwater quality. To reduce the impact on stormwater quality, Chesapeake will continue to implement the following stormwater program elements:

- Require compliance with ordinances through fines or other enforcement measures specified in the ordinances. Chapter 26: Environment of the City Code contains stormwater-related requirements.
- Continue intergovernmental coordination through involvement with HRPDC.
- Perform maintenance as needed throughout the stormwater system.
- Provide P2/stormwater training for selected City employees.
- Perform annual inspections of the following City yards:
 - Bowers Hill – Bridges
 - Bowers Hill – Streets and Highways
 - Chesapeake Expressway
 - Hickory
 - Jordan Bridge
 - Butts Station – Stormwater
 - Butts Station – Streets and Highways
 - Traffic Operations
 - Waste Management
 - Public Utilities (main yard)
 - Public Utilities Northwest River Water Treatment Plant
 - City Garage
 - City Fuel Sites (7 locations)
 - Parks and Recreation/General Services (main yard)
 - Mosquito Control (4 locations)
- Allow special police powers for enforcement of environmental regulations.

- Maintain memorandum of agreement with School Board regarding BMP inspection and maintenance.
- Perform street sweeping in accordance with City schedule.
- Store deicing materials under cover.
- Perform routine maintenance of City-owned oil-water separators.

2.3 Proposed Changes to Current Program

Chesapeake recognizes that its current program, while effective, can be improved. The following are proposed changes to the City's existing program that will allow better protection of stormwater quality.

2.3.1 Public Education

- Develop erosion and sediment control information to distribute to contractors during the site plan review process.

2.3.2 Public Involvement

- Continue existing programs; no changes proposed.

2.3.3 Illicit Discharge Detection and Elimination

- Develop written, City-wide standard operating procedures for response to petroleum and hazardous material spills.
- Review and revise, if necessary, standard operating procedures for identifying the composition of illicit discharges.
- Increase the number of dry weather inspections to 20 annually. Chesapeake is not a highly industrial city. Four of the twenty will focus on industrial areas within the City. Sites that had flow in previous years will be re-tested.
- Obtain list of all VPDES permitted industrial facilities within the City from DEQ annually.
- Develop special programs to identify pollutants in response to TMDLs, as necessary.

2.3.4 Construction Site Stormwater Runoff Control

- Continue existing Erosion and Sediment Control program; no changes proposed.

2.3.5 Post-Construction Stormwater Management in New Development and Redevelopment

- Develop a program to randomly inspect privately-owned BMPs. ✓
- Develop written SOPs for inspections of public BMPs. ✓

2.3.6 Pollution Prevention and Good Housekeeping for Municipal Operations

- Evaluate and revise the City Stormwater Management Plan during the permit period.
- Develop a checklist for municipal inspections of City yards.
- Evaluate City properties to determine whether inspections are necessary at additional facilities.
- Mark stormwater inlets at City yards where inspections are performed.
- Implement an Environmental Management System for selected City operations.
- Continue implementation of UST compliance program for City-owned USTs.
- Develop AST compliance program for City-owned ASTs.

2.4 Measurable Goals and Schedule

Tables 2 through 8 list the program elements discussed previously to meet the requirements of CFR Title 40 Part 122.26 Section (d)(2)(iv) and provide corresponding reportable measures and proposed schedules for implementation. The tables are organized based on the six minimum control measures. Table 3 defines educational activities to be performed on a regional basis by HR Storm.

Table 2. Chesapeake Activities to Address Public Education Requirements

Activity	Reportable Measure	Schedule
Participate in HR Storm	Number of committee meetings attended by City staff; annual report of HR Storm activities	Annually
Information regarding disposal of used oil and toxic materials; proper use of pesticides, herbicides, and fertilizers; and illicit discharges on City website	City website	Continually
Make presentations and provide educational information to civic groups	Number of presentations made and approximate number of attendees	Annually
Require that each construction site designate a state-certified responsible land disturber (RLD)	Name and contact information for RLD on file for each construction site	Continually
Educational information regarding disposal of used oil and toxic materials; proper use of pesticides, herbicides, and fertilizers; and information regarding illicit discharges to residents	Number of brochures distributed	Annually
Distribute newsletter including stormwater news and information, pollution prevention tips, and the stormwater website address to residents	Goal: 1,000/year; report number of newsletters distributed	Annually
Provide erosion and sediment control educational information in the Public Facilities Manual, available in print or on-line	Public Facilities Manual containing erosion and sediment control guidance	Continually
Develop erosion and sediment control information to distribute to contractors during the site plan review process	Develop educational materials	Year 2
Stormwater education programs in City schools	Number of packages distributed	Years 3-5
	Number of school children who receive educational materials	Annually

Table 3. Proposed Regional Initiatives to Address Public Education for Phase I MS4s through HR Storm

Activity	Reportable Measure	Schedule
Develop HR Storm Communications Plan	Written document	Year 1
Provide pollution prevention-related training for municipal employees	List of attendees	Annually
Provide education regarding proper disposal of used oil and toxic materials on HR Storm website	Information available on website; number of website hits	Continually
Provide education regarding proper disposal of used oil and toxic materials on radio spots	Number of radio spots aired	Years 2, 5
Provide education regarding proper use of pesticides, herbicides, and fertilizers on HR Storm website	Information available on website	Years 2 – 5
Provide brochures regarding proper use of pesticides, herbicides, and fertilizers	Number of brochures distributed	Annually
Provide education regarding illicit discharges on HR Storm website	Information available on website	Years 3 - 5
Provide education regarding industrial stormwater runoff on HR Storm website	Information available on website	Continually
Develop educational brochure regarding illicit discharges targeted to industry	Brochure	Year 3
Cities distribute brochure to industrial VPDES dischargers	Number of brochures distributed; mailing list	Years 4, 5
Work with DCR to obtain E&S educational material targeted to site contractors	Educational materials	Year 3
Work with professional and/or trade organizations to provide educational information to contractors	Presentation(s) and/or information in newsletter(s) and/or handouts at meetings, as determined to be most appropriate based on organization format and activities	Year 4
Continue education regarding litter prevention	Number of radio and/or television spots, number of hits on HR Clean website	Annually

Table 4. Chesapeake Activities to Address Public Involvement Requirements

Activity	Reportable Measure	Schedule
Hold public meetings for ordinance changes	Number of public meetings held	As needed
Meetings with civic leagues	Number of presentations and approximate number of attendees	Annually
Include public involvement in updates to the City Comprehensive Plan	Number of citizen comments	When Comp Plan updated
Provide and publicize a telephone number for reporting stormwater complaints and violations, including illicit discharges	Number of calls with accompanying City actions	Continually, report annually
Organize volunteer litter removal programs	Approximate number of events and volunteers; approximate amount (by weight) of debris removed	One event per year

Table 5. Chesapeake Activities to Address Illicit Discharge Detection and Elimination Requirements

Activity	Reportable Measure	Schedule
Enforce Section 26-346, Illicit Discharges, of the City Code	Number of illicit discharges detected and eliminated	Continually, report annually
Provide response to petroleum and hazardous material spills through the Fire Department and the Department of Public Works	Number and nature of spill responses	Annually
Provide response to sanitary sewer spills through the Department of Public Utilities	Number and approximate volume of spills contained	Annually
Continue participation in regional web-based sewer spill reporting system.	Data from reporting system	Continually, report annually
Continue the Department of Public Utilities' inflow and infiltration reduction program	Summary of investigative work and upgrades performed	Annually
Continue the Department of Public Utilities' sanitary sewer upgrade program	Summary of work performed	Annually
Require certification of City employees to apply pesticides, herbicides, and fertilizers	Number of employees certified	Annually
Document illicit discharges identified and eliminated	Number detected and eliminated	Annually
Fire Department inspections of TSD and industries subject to EPCRA 313 on as-needed basis	List of facilities inspected; inspection reports on file	As needed
Update map of stormwater system and outfalls as necessary	Map	As necessary
Develop written, City-wide SOPs for response to spills	Written SOPs	Year 3
Review and revise, if necessary, SOPs for identifying composition of illicit discharges	Revised SOPs (if necessary)	Year 3
Dry weather inspections	Inspection reports	20/Year (4/Year industrial)
	Monitoring results for sites with flow	As needed

Activity	Reportable Measure	Schedule
Obtain list of VPDES permitted industrial facilities within the City from DEQ annually.	List of facilities	Annually
Develop special programs to identify pollutants in response to TMDLs	Description of programs developed, with results as appropriate	As needed

Table 6. Chesapeake Activities to Address Construction Site Runoff Control Requirements

Activity	Reportable Measure	Schedule
Work to achieve and maintain a fully consistent E&S program	Program that is fully consistent or provisionally consistent. Report number of plans reviewed, number of land disturbance permits, acreage of land disturbed, number of inspections, and number of enforcement actions.	Continually, report annually
Require that plan reviewers and inspectors are certified or working towards certification	Number of certified reviewers and inspectors	Annually
Provide erosion and sediment control guidance in the Public Facilities Manual	Public Facilities Manual available in print and on-line	Continually

Table 7. Chesapeake Activities to Address Requirements for Post-Construction Stormwater Runoff Control for Development and Redevelopment

Activity	Reportable Measure	Schedule
Comply with the Chesapeake Bay Preservation Act	Chesapeake Bay Preservation Area District with enforcement mechanisms	Continually
Require BMPs to address quantity and quality of stormwater runoff from new development and redevelopment	Number of BMPs installed	Annually
Regularly inspect public BMPs	Perform annual inspections so that public BMPs are inspected on a two-year cycle; maintain inspection and maintenance reports on file	Annually
Require maintenance agreements for privately-owned structural BMPs	Maintenance agreements on file	Continually
Assess the impacts of flood management projects on water quality	Description of projects considered	Annually
Enforce landscaping requirements in new development	Site plans on file	Continually
Maintain BMP database	Database	Annually
Provide BMP design guidance in Public Facilities Manual	Manual available in print and on-line	Continually
Random inspections of privately-owned BMPs	Written policy and SOPs for random inspections of private BMPs	Year 5
Develop written SOPs for inspections of public BMPs	Written SOPs	Year 3

Table 8. Chesapeake Activities to Address Requirements for P2 and Good Housekeeping for Municipal Operations

Activity	Reportable Measure	Schedule
Require compliance with ordinances through fines or other enforcement measures specified in the ordinances	Chapter 26: Environment with enforcement mechanisms	Continually
Intergovernmental coordination through involvement with HRPDC	Number of HRPDC meetings attended by City staff	Annually
As-needed maintenance throughout the stormwater system	Report work performed	Annually
P2/stormwater training for selected City employees	List of attendees, description of training provided	Annually
Annual inspections of City yards	Documented inspections for yards listed in Section 2.2	Annually
Allow special conservators of the police to enforce the stormwater code	List of special conservators; number of violations	Annually
Maintain memorandum of agreement with the School Board regarding BMP inspection and maintenance	MOA	Continually
Perform street sweeping in accordance with City schedule	Report pounds of debris removed from streets	Annually
Store deicing salts under cover	Approximate amount of salt and sand used	Annually
Perform routine maintenance of City-owned oil-water separators	Documentation of maintenance performed	Annually
Evaluate and revise the City Stormwater Management Plan during the permit period	Updated Stormwater Management Plan	Year 5
Checklist for municipal inspections of City yards	Checklist	Year 1
Evaluate City properties to determine whether inspections are necessary at additional facilities	Documentation of evaluation; list of additional facilities if necessary	Year 2
Mark stormwater inlets at City yards where inspections are performed	Inlets marked to indicate connection to storm sewer	Year 3 ✓
Implement Environmental Management Systems for selected City operations	Documented Environmental Management System	Years 1, 3 ✓

Activity	Reportable Measure	Schedule
Continue implementation of UST compliance program for City-owned USTs	Checklist for City-owned UST inspections	Year 1
	Quarterly inspections of City-owned USTs	Years 1-5
Develop AST compliance program for City-owned ASTs	Review condition of City-owned ASTs; identify and correct any deficiencies	Year 1
	Checklist for City-owned AST inspections	Year 2
	Regular inspections of City-owned ASTs	Years 2-5

3.0 PROPOSED ACTIVITIES TO ADDRESS TMDLS

A draft TMDL has been developed for Milldam Creek. At this time, no final TMDLs have been approved within the City of Chesapeake. The City will work with DEQ to develop and comply with future TMDLs and implementation plans as they arise. Table 9 lists waters currently designated as impaired by DEQ within the City of Chesapeake.

Table 9. Impaired Waters in Chesapeake

Water Body	Reason for Classification	Source of Impairment	TMDL Date
Albemarle Canal	Dissolved oxygen, chloride	natural, natural	2010
Deep Creek	Fish tissue - PCBs	unknown	2014
Dismal Swamp, feeder canal	pH, dissolved oxygen, fish tissue - mercury	natural, natural, unknown	2010
Elizabeth River	EPA overlisting, benthic	unknown, unknown	2010
Elizabeth River, Eastern Branch (lower)	Fecal coliform, tributyltin, fish tissue - PCBs	unknown, commercial port activities, unknown	2010
Elizabeth River, Southern Branch	Tributyltin	commercial port activities	2010
Elizabeth River, Southern Branch	Fecal coliform	unknown	2014
Elizabeth River, Southern Branch	Dissolved oxygen	unknown	2016
Elizabeth River, Southern Branch at Paradise Creek	Dissolved oxygen	unknown	2016
Elizabeth River, Western Branch	Fish tissue - PCBs	unknown	2014
Elizabeth River, Western Branch (upper)	Fecal coliforms and enterococci	unknown	2016
Indian Creek	Dissolved oxygen, fecal coliform, e. coli	unknown, unknown	2010
Indian River	Fecal coliform	unknown	2014
North Landing River	Chloride	natural	2016
Northwest River (upper & middle)	Dissolved oxygen	unknown	2010
Northwest River (lower) unnamed tributary	Dissolved oxygen	unknown	2014
Pocaty River	Dissolved oxygen	unknown	2014
St. Julian Creek	Fish tissue - PCBs	unknown	2016

4.0 EFFECTIVENESS INDICATORS

Because chemical stormwater monitoring was not found to be a useful method for determining local stormwater management program effectiveness, the six Hampton Roads Phase I municipalities requested permit modifications that were granted in 2001. In lieu of chemical monitoring, the cities currently track the following elements of their stormwater programs:

- Pollutant loadings
- Greenlands programs
- Investigative monitoring
- BMP implementation
- Flooding and drainage control
- Flooding and drainage projects
- Erosion and sediment control
- Permitting and compliance
- Operations and maintenance
- Public information programs

Chesapeake will work with the Hampton Roads Planning District Commission and the other five cities that utilize the effectiveness indicators to ensure the indicators are as useful as possible in evaluating the effectiveness of the stormwater program at reducing pollution. The six cities will jointly submit the proposed effectiveness indicators for this permit period to DCR under separate cover by October 12, 2005.

5.0 PREVIOUSLY UNIDENTIFIED WATER BODIES THAT RECEIVE MS4 DISCHARGES

At this time, no water bodies receive MS4 discharges that have not been reported in previous MS4 permit applications or in Annual Reports provided under the conditions of the existing VPDES MS4 permit. The most recent map of the stormwater system is included on CD with this permit application.

6.0 KNOWN WATER QUALITY IMPACTS

As shown in Section 3, DEQ has not attributed the cause of impaired waters located within the City of Chesapeake to urban causes, other than commercial port activities that are not operated by the City. However, the City recognizes that urban areas contribute pollutants to surrounding surface waters. Therefore, Chesapeake will continue to implement programs designed to improve water quality.

7.0 ATTACHMENTS

- Location map
- CD containing stormwater system map
- 2005 Annual Report